

Remarks:

Status of Claims

Claims 1-16 are pending with claims 1, 8, and 14 being independent.

Office Action

The Examiner rejected claims 1-6 and 8-15 under 35 USC 102(b) as being anticipated by Morimoto (U.S. Patent No. 5,757,359) and claims 7 and 16 under 35 USC 103(a) as being unpatentable over Morimoto in view of Neher (U.S. Patent No. 6,362,778). Applicant respectfully submits that the Examiner's cited references and all other prior art of record, alone or in combination, fail to anticipate or render obvious the present invention. Specifically, the combination fails to disclose or suggest a "portable handheld housing", as set forth in independent claims 1, 8, and 14; the feature of adjusting "a starting point for the route calculation to an appropriate location such that the device is on the route at a time when the route calculation is completed", as set forth in claims 2 and 13; and the feature of receiving data from a remote server through a communication channel selected from the group consisting of a wireless communication channel, a satellite communication channel, a local area network channel, a wide-area network channel, and a virtual private network channel, as set forth in claims 6, 7, 15 and 16.

The present invention provides a navigational device including audible instruction capabilities which is housed in a portable handheld housing. The navigational device, due to its portable and handheld construction, may be utilized in various environments, such within a motor vehicle, a marine vessel, an aircraft, by a user on foot or bicycle, etc. Similarly, the navigation device may be easily transported between the various environments to allow the user to utilize a single navigational device for operation within the various environments, instead of utilizing a separate navigation device for each environment.

The portable handheld housing also enables the present invention to be utilized in environments in which conventional navigational devices having audible instruction capabilities are unable to operate. For instance, the present invention may be utilized by a user while walking or

cycling, such that the user is not required to constantly view the device for navigational information, as the device provides audible instructions. In contrast, conventional navigational devices having audible instruction capabilities are unable to operate outside of a motor vehicle, or any other environment lacking a substantial power source such as a gas-powered engine, due to the power requirements of the complex conventional devices. Thus, conventional non-handheld devices having audible instruction capabilities may not be utilized by a user while walking, cycling, or engaging in similar activities.

Additionally, the present invention adjusts a starting point for a route calculation to an appropriate location such that the device is on the route at a time when the route calculation is completed. The starting point is adjusted as the device calculates an additional route, such as a new route or a return route to a desired route, to ensure that the navigation information provided by the device is accurate when the calculation of the additional route is completed. Therefore, a user may progress on the additional route without being required to select the additional route or stop traveling to input a starting location for the additional route. These features have been described in detail during the prosecution of the referenced parent applications, U.S. Patent No. 6,545,637 and U.S. Application No. 10/365,171. In contrast, conventional navigational devices require a user to input a starting point for a route calculation or require the user to be on a pre-calculated route to adjust the starting point of a route. Thus, a user of the present invention may easily be provided an alternate route, such as a return route to a desired route when the user has inadvertently varied from the desired route, without requiring the user to stop, determine a present location, and input the present location and a starting point into the navigation device.

Furthermore, the present invention is operable to communicate with a remote server via a communications channel to receive data from the remote server. The communication channel may be a wireless communication channel, a satellite communication channel, a local area network channel, a wide-area network channel, or a virtual private network channel. In contrast, conventional navigational devices are generally operable to communicate with a remote server through only elementary means, such as a single serial connection. Additionally, other conventional navigational

devices are generally able to only transmit data to the remote server and may not receive data from the remote server. Thus, the present invention may receive data from a remote server through a variety of communication channels.

Rejections under 35 USC 102(b)

The Examiner rejected claims 1-6 and 8-15 under 35 USC 102(b) as being anticipated by Morimoto. Applicant respectfully submits that Morimoto fails to disclose or suggest a navigation device housed in a portable handheld housing or a navigational device which adjusts a starting point for a route calculation to an appropriate location such that the device is on the route at a time when the route calculation is completed.

The Examiner concluded that Morimoto includes a portable handheld housing based on the "overall construction of Fig. 16" and col. 10, lines 13 - 53 (Office Action page 2). However, Morimoto actually discloses a vehicular information display system (title) which "includes a display screen mounted on a vehicle" (abstract). The "overall construction" of Fig. 16, which is a block diagram showing individual elements of a navigational system, does not disclose or suggest a portable handheld navigational device, but instead suggests a complex device having substantial power requirements which must be mounted in a vehicle. Furthermore, col 10, lines 13 - 53, do not disclose or suggest a portable handheld housing, but instead disclose a vehicle mounted navigation system which may be coupled with a portable handheld device (an electronic note) to transmit and receive information. The navigation system of Morimoto is not housed in a portable handheld housing, but instead is mounted in a vehicle and may be coupled with an electronic note such as a pocket calculator.

Thus, the navigation system of Morimoto is merely a conventional navigational system including audible instruction capabilities that must be mounted in a vehicle due to the complexity and power requirements of its navigational and computing elements. It will be appreciated that the problems encountered in mounting a navigational device within a vehicle and the problems encountered with providing a portable handheld navigation device are entirely different due to the

battery capacity and electric generating abilities of an automobile engine. For instance, a portable handheld navigation device having processing power sufficient to provide audible navigational instructions must be designed and constructed differently from a conventional navigational apparatus, such as Morimoto, to avoid reliance on a large automobile battery or a gasoline engine for electric power. Therefore, Morimoto fails to disclose, mention, or suggest all claimed features of the present invention, namely a navigational system having audible instruction capabilities which is housed in a portable handheld housing.

The Examiner also concluded that Morimoto discloses the features of claims 2 and 13 as it "teaches adapting the device to adjust the route guidance." Applicant respectfully submits that the features of claims 2 and 13 do not recite "adapting the device to adjust the route guidance." Instead, the features of 2 and 13 include adjusting a starting point for a route calculation to an appropriate location such that the device is on the route at a time when the route calculation is completed, as described above in detail. Morimoto fails to disclose, mention, or suggest this feature. Instead, Morimoto only discloses conventional route planning functionality:

In order for the navigation system to set a route, it is necessary to input and set a starting point and destination. (Column 5, lines 26-28).

Such conventional functionality must be differentiated from the functionality provided by the present invention, which does not require a user to input and set a starting point for a route. Thus, Morimoto fails to disclose, mention, or suggest this important feature of claims 2 and 3.

Rejections under 35 USC 103(a)

Claims 7 and 17 include the feature of receiving data from a remote server through a communication channel selected from the group consisting of a wireless communication channel, a satellite communication channel, a local area network channel, a wide-area network channel, and a virtual private network channel. The Examiner rejected these claims under 35 USC 103(a) as being unpatentable over Morimoto in view of Neher. Specifically, the Examiner determined that the combination of the navigation system of Morimoto, which lacks a communication channel, with the

communication channel of Neher discloses all features of claims 7 and 17. Applicant respectfully submits that the combination of Morimoto and Neher does not disclose, mention, or suggest all features of claims 7 and 17 as the communication channel of Neher does not disclose a communication channel including either a local/wide area network channel or a virtual private network connection or a navigation device having a communication channel operable to receive data from a remote server.

Specifically, the communication channel of Neher does not include a local/wide area network channel or a virtual private network connection. Instead, the communication channel of Neher is limited to a "Plain Old Telephone System (POTS), cellular, PCS or the internet" (column 9, lines 61-63). The communication channel of Neher is utilized to transmit information from a watch, worn by a child or a prisoner, to a remote server such that the location of the watch may be monitored by a third party. The watch is not provided with a local/wide area network connection or a virtual private network connection, as the wearer of the watch, the child or prisoner, is not intended to have the type of unsupervised access provided by a local/wide area network or a virtual private network.

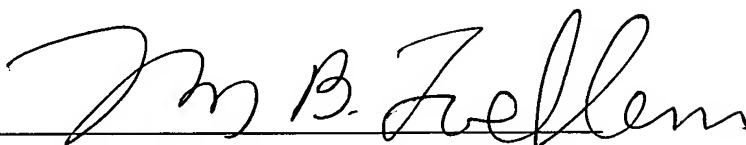
Additionally, the communication channel of Neher is limited to allowing data to be transmitted from a portable device to a remote server to determine the location of the portable device. The portable device is not operable to receive data from the remote server through the communications channel. As shown in FIG. 2 and described in column 11, lines 25-44, the portable device (the watch) lacks any ability to receive information from the remote server and includes a single display for indicating the current time and a plurality of buttons which transmit signals to a remote server. The watch is not operable or intended to receive data from the remote server as allowing the wearer of the watch, the child or prisoner, to receive data teaches away from Neher as the purpose of the watch is to provide security to a third party by constantly monitoring the position of the child or prisoner and not to provide information to the child or prisoner. Thus, the combination of Morimoto and Neher fails to disclose all features of claims 7 and 17.

Conclusion

The Examiner has failed to establish a proper basis for rejection under 35 USC 102(b) as Morimoto fails to disclose all claimed features of the present invention, namely a portable handheld housing for a navigation device having audible instruction capabilities, as set forth in independent claims 1, 8, and 4, or adjusting a starting point for a route calculation to an appropriate location such that a device is on the route at a time when the route calculation is completed, as set forth in claims 2 and 13. Additionally, the Examiner has failed to establish a prima facie case of obviousness under 35 USC 103(a) as the Examiner's combination of Morimoto and Neher fails to disclose or suggest all features of claims 7 and 16, namely a communication channel selected from the group consisting of a wireless communication channel, a satellite communication channel, a local area network channel, a wide-area network channel, and a virtual private network channel.

In view of the remarks herein, applicant respectfully submits that claims 1-16 are now in allowable condition and requests a Notice of Allowance. In the event of further questions, the Examiner is urged to call the undersigned. Any additional fee which is due in connection with this amendment should be applied against our Deposit Account No. 19-0522.

Respectfully submitted,
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ATTORNEYS FOR APPLICANT(S)

METHOD AND APPARATUS FOR SANITIZING PERISHABLE GOODS IN ENCLOSED CONDUITS

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of pending Application No. PCT/US01/_____, entitled CONTINUOUS PRODUCTION AND PACKAGING OF PERISHABLE GOODS IN LOW OXYGEN ENVIRONMENTS, filed Nov. 28, 2001, attorney docket no. CRSL-1-18064, designating the United States, which in turn is a continuation-in-part of pending Application No. 09/724,287, filed Nov. 28, 2000, which in turn is a continuation-in-part of pending Application No. PCT/US00/29038, filed Oct. 19, 2000, designating the United States, which in turn is a continuation of U.S. application Ser. No. 09/550,399, filed Apr. 14, 2000, now abandoned, which in turn is a continuation-in-part of U.S. application Ser. No. 09/392,074, filed Sep. 8, 1999, now abandoned, which in turn is a continuation of U.S. application Ser. No. 09/039,150, filed Mar. 13, 1998, now abandoned, which in turn claims the benefit of U.S. Provisional Application No. 60/040,556, filed Mar. 13, 1997, and claims the benefit of U.S. Provisional Application Serial No. 60/129,595, filed Apr. 15, 1999; No. 60/141,569, filed Jun. 29, 1999; No. 60/144,400, filed Jul. 16, 1999; No. 60/148,227 filed Jul. 27, 1999; No. 60/149,938, filed Aug. 19, 1999; No. 60/152,677, filed Sep. 7, 1999; No. 60/154,068, filed Sep. 14, 1999; No. 60/160,445, filed Oct. 19, 1999; and No. 60/175,372, filed Jan. 10, 2000; No. 60/255,684, filed Dec. 13, 2000; No. 60/286,688, filed Apr. 26, 2001; No. 60/291,872, filed May 17, 2001; No. 60/299,240, filed Jun. 18, 2001; No. 60/312,176, filed Aug. 13, 2001, No. 60/314,109, filed Aug. 21, 2001; No. 60/323,629, filed Sep. 19, 2001; and No. 60/335,760, filed Oct. 19, 2001. All the above applications are herein expressly incorporated by reference.

FIELD OF THE INVENTION

[0002] The present invention relates to the sanitizing of perishable food items in enclosed conduits.

BACKGROUND OF THE INVENTION

[0003] Ozone has been recognized as safe to use in food processing. Accordingly, food processing equipment suppliers have begun to supply equipment using ozone in washing various foods, for use by food processors. One such equipment supplier is BOC Gases of Murray Hill, N.J. BOC has developed a process (the SafeQuest system) which utilizes ozone in the treatment of poultry. In this system, a chilled bath is filled with ozonated water and poultry carcasses are immersed therein and transferred by conveyor means through ozonated water. The technology is based on a process called the Macron loop. A pump moves water from the chiller bath through a filter. The filtered ozonated water is then titrated with ozone gas, effectively killing any pathogens, such as *E. coli* 0157:H7 and salmonella and oxidizes any residual organic materials before being recycled through the process, thus saving on waste water treatment costs.

[0004] A Con Agra Company poultry processing plant also uses ozone to enable the recycling of process wash water. Once the water has been used, the water passes

through a series of ozone vessels. Ozone gas is pumped into the vessels to kill any microorganisms. The system strips out any residual ozone prior to returning it to a chiller. Any residual ozone is captured and run through a catalytic destruction unit. This provides for conserving up to about 80% of recycle water, thus saving the company water, energy and waste water treatment costs.

[0005] However, the present methods for using ozonated water to wash food products are for the most part conducted in open vats or in ambient environments wherein, the amount of ozone exposure is relatively uncontrolled.

[0006] Ozonated water remains a viable method of sanitizing meat or any other perishable good. However, widespread use of ozone has been hampered by the inability to properly control the amount of ozone exposure to the meat. Ozone is a strong oxidizer and will render perishable goods, such as meat, unsuitable for consumption if the exposure time to ozone is not properly controlled.

[0007] Therefore, methods and apparatus for treating meat with ozone are in need of development. The present invention fulfills these needs.

SUMMARY OF THE INVENTION

[0008] One aspect of the invention is a method for sanitizing perishable goods by mixing the goods with sanitizing fluid for a suitable period of time followed by separating the fluid and substantially neutralizing any sanitizing fluid left over in the goods.

[0009] The invention is directed to a method and apparatus for sanitizing perishable goods by mixing the goods with sanitizing fluid for a suitable period of time followed by separating the fluid and substantially neutralizing any residual sanitizing agent left with the goods. In one instance, the sanitizing fluid includes ozone and water, therefore separation of the ozonated water advantageously can proceed under a squeezing effect to more adequately remove the ozonated water from the goods. Alternatively excess fluid may be separated from goods by use of an enclosed centrifugal apparatus integrated into the sanitizing system. Following neutralization, the goods may further be treated with an antioxidant to reduce the deleterious oxidizing effects of ozone on the beef.

[0010] In another aspect of the present invention, a sanitizing apparatus for goods includes a chamber section with a mixing portion and a separating portion. The mixing portion uses paddles disposed on a rotating shaft, and the separating portion uses closer spaced paddles or a spiral screw with increasing cylinder diameter to separate a sanitizing fluid from the goods. Any number of similar chamber sections can be connected together to process goods such as beef with differing fluids, such as neutralizing fluids or antioxidants.

[0011] The present invention can thus provide precise control of exposure time to minimized ozone concentration, thus sanitizing the beef without causing deleterious effects on beef. A further advantage is the ability to keep the meat enclosed within a conduit and thus reduce exposure to oxygen.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The foregoing aspects and many of the attendant advantages of this invention will become more readily